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(54) **HIGH VOLTAGE FIELD BALANCE METAL OXIDE FIELD EFFECT TRANSISTOR (FBM)**

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(57) **ABSTRACT**

A semiconductor power device formed in a semiconductor substrate comprising a highly doped region near a top surface of the semiconductor substrate on top of a lightly doped region supported by a heavily doped region. The semiconductor power device further comprises source trenches opened into the highly doped region filled with conductive trench filling material in electrical contact with the source region near the top surface. The semiconductor power device further comprises buried P-regions disposed below the source trenches and doped with dopants of opposite conductivity from the highly doped region. It is emphasized that this abstract is provided to comply with the rules requiring an abstract that will allow a searcher or other reader to quickly ascertain the subject matter of the technical disclosure. It is submitted with the understanding that it will not be used to interpret or limit the scope or meaning of the claims.